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Working Party on Passive Safety

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Item 15 of the provisional agenda
Proposal for a new Regulation on Frontal Impact

Draft new 01 series of amendments to the draft new Regulation on uniform provisions for the approval of passenger cars in the event of a frontal collision with focus on the restraint system

Submitted by the expert from France as Chair of the Informal Working Group on Frontal Impact *

The text reproduced below was prepared by the experts from the Informal Working Group on Frontal Impact (IWG FI) as an outcome of discussions of the Working Party on Passive Safety (GRSP) at its fifty-sixth session (ECE/TRANS/WP29/GRSP/56, para. 37). The aims is developing a separate new UN Regulation on frontal impact focusing on requirements for restraint systems. The proposal establishes a new series of amendments to the draft UN Regulation introducing a Thorax Compression Criterion (ThCC) of 34 mm. It is based on an informal document GRSP-56-23-Rev.2 distributed at that session. The modifications to the current text of ECE/TRANS/WP.29/GRSP/2014/10 are marked in bold for new or strikethrough for deleted characters.

* In accordance with the programme of work of the Inland Transport Committee for 2012–2016 (ECE/TRANS/224, para. 94 and ECE/TRANS/2012/12, programme activity 02.4), the World Forum will develop, harmonize and update Regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate.

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I. Proposal

Paragraph 4.2., amend to read:

"4.2. An approval number shall be assigned to each type approved. Its first two digits (at present **01** corresponding to the **01** series of amendments) shall indicate the series of amendments incorporating the most recent major technical amendments made to the Regulation at the time of issue of the approval. The same Contracting Party may not assign the same approval number to another vehicle type."

Paragraph 5.2.1.2.3., amend to read:

"5.2.1.2.3. The thorax compression criterion (ThCC) shall not exceed **34** mm. [1]

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[1] **This threshold limit is derived from the injury criteria of a 65-year old 5th percentile female. This criterion should be limited to the front outboard passenger position under the load case and the test condition of this Regulation. Its usage should only be extended following further consideration and review."**

Insert new paragraphs 11. to 11.4., to read:

"11. Transitional provisions

11.1. As from the official date of entry into force of the 01 series of amendments to this Regulation, no Contracting Party applying this Regulation shall refuse to grant or refuse to accept type approvals to this Regulation as amended by the 01 series of amendments.

11.2. Even after the date of entry into force of the 01 series of amendments, Contracting Parties applying this Regulation may continue granting type approvals, and shall not refuse to grant extensions of type approvals, to this Regulation in its original form.

11.3. As from 1 September 2020, Contracting Parties applying this Regulation shall not be obliged to accept type approvals to the original form of this Regulation, as issued on 1 September 2020.

11.4. After 1 September 2020, Contracting Parties applying this Regulation shall continue to accept approvals of vehicle types to this Regulation in its original form, which were granted before 1 September 2020."

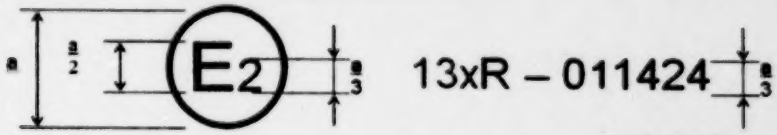
Annex 2, amend to read:

"**Annex 2**

Arrangements of approval marks

Model A

(See paragraph 4.4. of this Regulation.)

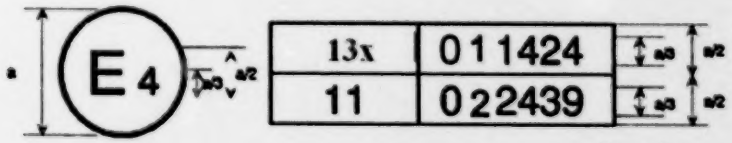


a = 8 mm min.

The above approval mark affixed to a vehicle shows that the vehicle type concerned has, with regard to the protection of the occupants in the event of a frontal collision, been approved in ~~the Netherlands (E 4)~~ **France (E2)** pursuant to Regulation No. ~~[~~13X~~]~~ under approval number ~~021424~~ **001424**. The approval number indicates that the approval was granted in accordance with the requirements of Regulation No. ~~[~~13X~~]~~ ~~as amended by the~~ 0~~2~~**1** series of amendments.

Model B

(See paragraph 4.5. of this Regulation.)



a = 8 mm min.

The above approval mark affixed to a vehicle shows that the vehicle type concerned has been approved in the Netherlands (E 4) pursuant to Regulations Nos. [13X] and 11.[1] The first two digits of the approval numbers indicate that, at the dates when the respective approvals were granted, Regulation No. [13X] incorporated the ~~02~~ **01** series of amendments and Regulation No. 11 incorporated the 02 series of amendments."

II. Justification

1. The purpose of this proposal is to introduce the 01 series of amendments to UN[13X] to enable Contracting Parties applying this Regulation to implement the Full Width Rigid Barrier test with ThCC of 34 mm for the Hybrid III fifth percentile female dummy on the passenger seat.

[1] The latter number is given only as an example.

2. Currently, it is agreed that the vehicle shall be tested and approved in accordance with the method described in Annex 3, using the Hybrid III fifth percentile female dummy on the passenger seat. There are, however, two proposals for ThCC: 34 mm and 42 mm. The final criterion has yet to be resolved.

3. In the light of technical difficulties at present, ThCC of 42 mm is a milestone toward attaining ThCC of 34 mm. This is why the proposed two-step approach should be recommended, as it would encourage Contracting Parties to attain ThCC of 34 mm, and also both the 00 series and 01 series shall be adopted at the same time.